

=> file reg
FILE 'REGISTRY' ENTERED AT 10:56:43 ON 02 NOV 2005
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=> display history full 11-

FILE 'LREGISTRY' ENTERED AT 10:23:10 ON 02 NOV 2005
L1 STR
L2 STR
L3 STR L1

FILE 'REGISTRY' ENTERED AT 10:36:22 ON 02 NOV 2005
L4 50 SEA SSS SAM L1
L5 SCR 1840
L6 50 SEA SSS SAM L1 NOT L5

FILE 'LREGISTRY' ENTERED AT 10:39:06 ON 02 NOV 2005
L7 STR L1

FILE 'REGISTRY' ENTERED AT 10:41:12 ON 02 NOV 2005
L8 11 SEA SSS SAM L7
L9 STR L7
L10 25 SEA SSS SAM L9
L11 1370 SEA SSS FUL L9
SAV L11 COS111/A
L12 0 SEA SUB=L11 SSS SAM L2
L13 6 SEA SUB=L11 SSS FUL L2
SAV L13 COS111A/A
L14 0 SEA SUB=L11 SSS SAM L3
L15 STR L3
L16 0 SEA SUB=L11 SSS SAM L15
L17 16 SEA SUB=L11 SSS FUL L15
SAV L17 COS111B/A

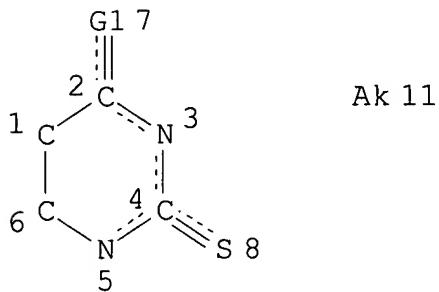
FILE 'HCA' ENTERED AT 10:53:48 ON 02 NOV 2005 ,
L18 4 SEA L13
L19 7 SEA L17
L20 323 SEA L11
L21 336452 SEA ((LUBRIC? OR LUBE# OR GREAS? OR ANTIFRIC? OR ANTIWEAR?
OR ANTICORRO? OR ANTIRUST? OR ANTIOXID? OR ANTI(W) (FRIC?
OR WEAR? OR CORRO? OR RUST? OR OXID?) OR SLICK? OR
SLIPP? OR OLEAGINOUS?)/BI,AB
L22 24942 SEA ((GEAR? OR ENGINE# OR CRANKCASE? OR MOTOR# OR

TRANSMISSION? OR HYDRAUL? OR MACHINE? OR (2 OR 4 OR TWO
OR FOUR) (W) (CYCLE# OR STROKE#)) (2A) (FLUID# OR OIL#))/BI,A
B

L23 7 SEA L20 AND (L21 OR L22)
L24 17 SEA L18 OR L19 OR L23

FILE 'REGISTRY' ENTERED AT 10:56:43 ON 02 NOV 2005

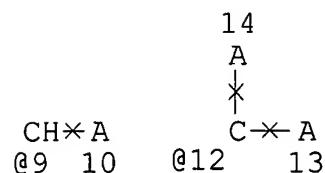
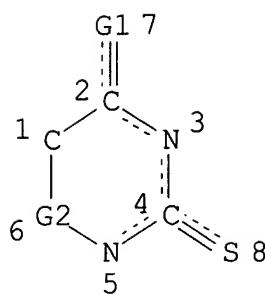
=> d 113 que stat
L2 STR



VAR G1=O/S
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 11
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M6 C AT 11

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L9 STR



VAR G1=O/S

VAR G2=CH2/9/12

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L11 1370 SEA FILE=REGISTRY SSS FUL L9

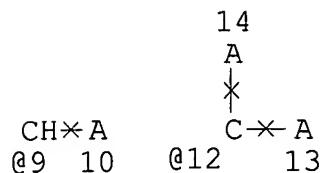
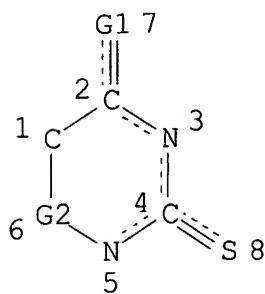
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100.0% PROCESSED 1370 ITERATIONS

SEARCH TIME: 00.00.01

6 ANSWERS

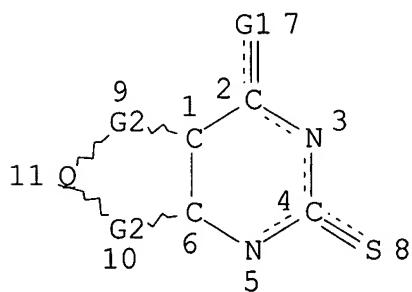
=> d 117 que stat
 L9 STR



VAR G1=O/S
 VAR G2=CH2/9/12
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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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 NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
 L11 1370 SEA FILE=REGISTRY SSS FUL L9
 L15 STR



VAR G1=O/S
 REP G2=(0-5) A
 NODE ATTRIBUTES:
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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

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NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L17 16 SEA FILE=REGISTRY SUB=L11 SSS FUL L15

100.0% PROCESSED 1370 ITERATIONS
SEARCH TIME: 00.00.01

16 ANSWERS

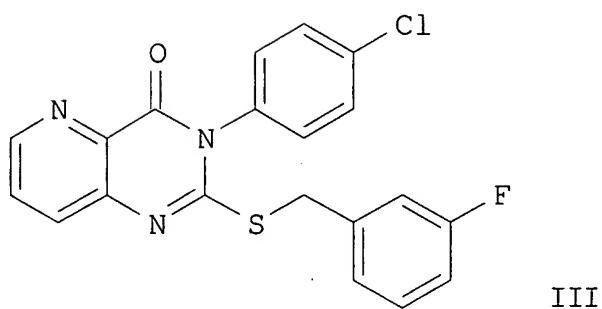
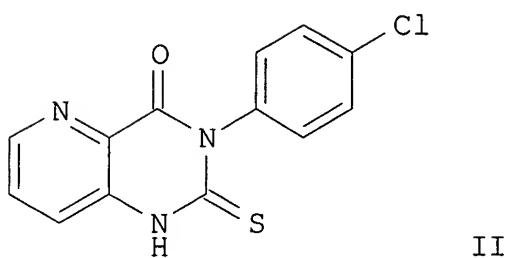
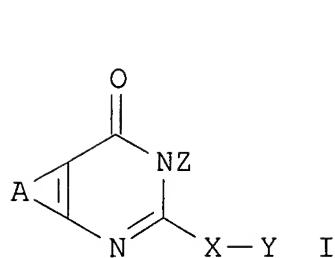
=> file hca
FILE 'HCA' ENTERED AT 10:57:36 ON 02 NOV 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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=> d 124 1-17 cbib abs hitstr hitind

L24 ANSWER 1 OF 17 HCA COPYRIGHT 2005 ACS on STN

143:26424 Preparation of bicyclic pyrimidin-4-(3H)-ones, their analogues and derivatives which modulate the function of the vanilloid-1 receptor (VR1). Hollingworth, Gregory John; Jones, A. Brian; Sparey, Timothy Jason; Bayliss, Tracy; Jarvis, Rebecca Elizabeth (Merck Sharp & Dohme Limited, UK). PCT Int. Appl. WO 2005049613 A1 20050602, 105 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2004-GB4816 20041112. PRIORITY: GB 2003-26634 20031114; GB 2004-8348 20040414.

GI



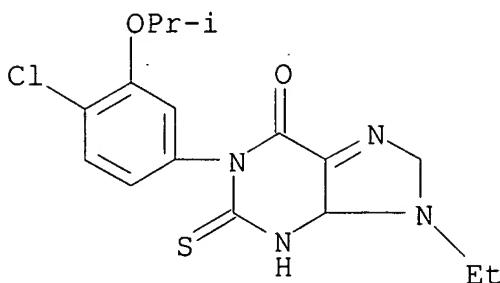
AB The title compds. I [A = CH:CHCH:CH, fused 5-membered heteroarom. ring, fused 6-membered heteroarom. ring; A is substituted with halide, OH, S(O)rC1-C4alkyl, S(O)rNR5R6, CHO, C1-C4alkylcarbonyl, (amino)(halo)(hydroxy)C1-C6alkyl, (halo)(hydroxy)C1-C6alkoxy, C3-C7cycloalkoxy, C3-C7cycloalkyl, C2-C6alkenyl, C2-C6alkynyl, NH2, cyano, NO2, C1-C6alkylamino, di(C1-C6alkyl)amino, aminoC1-C6alkyl, aminoC1-C6alkoxy, C1-C6alkylaminoC1-C6alkyl, di(C1-C6alkyl)aminoC1-C6alkyl, Ph, naphthyl, 5-membered heteroarom. ring; X = O, S, NR1, R1 = H, C1-C6alkyl; Y = (CR2R3)n(CO)p(NR4)qW, R2, R3 = H, OH, halide, C1-C4alkyl, R4 = H, C1-C6alkyl, n = 0-4, p, q = 0, 1, r = 0-2, W = H, (halo)C1-C6alkoxy, (halo)(hydroxy)(amino)(carboxy)C1-C6alkyl, (halo)C3-C7cycloalkyl, Ph, 5-membered heteroarom. ring; etc.] were prep'd. to treat or prevent conditions that may be ameliorated by modulating VR1 activity. For example, reacting dihydropyridopyrimidinone II with 3-FC6H4CH2Br in MeCN gave the benzylthio compd. III in 15% yield.

IT 852854-47-8P

(prepn. of bicyclic pyrimidinone derivs. for treatment or prevention of conditions ameliorated by modulating VR1 activity, pain, and inflammation in humans and animals)

RN 852854-47-8 HCA

CN 6H-Purin-6-one, 1-[4-chloro-3-(1-methylethoxy)phenyl]-9-ethyl-1,2,3,4,8,9-hexahydro-2-thioxo- (9CI) (CA INDEX NAME)



IC ICM C07D471-04
 ICS C07D495-04; C07D513-04; C07D473-22; C07D473-18; A61K031-522;
 A61P025-04

CC 26-9 (Biomolecules and Their Synthetic Analogs)
 Section cross-reference(s): 63

IT 4664-01-1P, 3,4-Pyridinedicarboximide 25379-86-6P 59826-53-8P
 771583-82-5P 852854-37-6P 852854-38-7P 852854-45-6P
 852854-46-7P **852854-47-8P** 852854-48-9P 852854-49-0P
 852854-50-3P 852854-51-4P 852854-52-5P 852854-53-6P
 852854-54-7P 852854-55-8P 852854-56-9P 852854-57-0P
 852854-58-1P 852854-59-2P 852854-60-5P 852854-61-6P
 852854-62-7P 852854-63-8P 852854-64-9P 852854-65-0P
 852854-66-1P 852854-67-2P 852854-68-3P 852854-70-7P
 852854-71-8P 852854-72-9P 852854-73-0P
 (prepn. of bicyclic pyrimidinone derivs. for treatment or
 prevention of conditions ameliorated by modulating VR1 activity,
 pain, and inflammation in humans and animals)

L24 ANSWER 2 OF 17 HCA COPYRIGHT 2005 ACS on STN
 142:393134 Synthesis of hexahydropyrimidine derivatives and their
 polymer stabilizing properties. Beresnevicius, Zigmuntas J.;
 Mickevicius, Vytautas; Rutkauskas, Kestutis; Kantminiene, Kristina
 (Kaunas University of Technology, Kaunas, LT-3028, Lithuania).
 Polish Journal of Chemical Technology, 5(3), 75-81 (English) 2003.
 CODEN: PJCTAP. ISSN: 1509-8117. Publisher: Technical University of
 Szczecin, Publishing House.

AB Twenty nine 1-aryldihydro-2,4(1H,3H)-pyrimidinediones, their 2-thio
 analogs, and 5- and 6-Me homologues were investigated as stabilizers
 of thermooxidative destruction. These derivs. of
 hexahydropyrimidine were synthesized by reaction of the
 corresponding N-aryl-, N-aryl-.alpha.-methyl- or
 N-aryl-.beta.-methyl-.beta.-alanines with carbamide or potassium
 rhodanide in acetic acid with the further addn. of hydrochloric
 acid. It was detd., that 1-(4-hydroxy-3,5-diisopropylphenyl)dihydro-
 2,4(1H,3H)-pyrimidinedione was the best stabilizer for poly(vinyl
 chloride). Low-d. polyethylene was effectively stabilized by
 1-(4-phenylaminophenyl)dihydro-4(1H,3H)-pyrimidinone-2-thione.

1-(1-Naphthyl)-, 1-(2-naphthyl)- and 1-(4-hydroxyphenyl)dihydro-4(1H,3H)-pyrimidinone-2-thiones were suitable stabilizers for polycaprolactam, polyamides PA 12 and PA 610. 1-(Hydroxyphenyl)-6-methyldihydro-4(1H,3H)-pyrimidinone-2-thione was sol. in ethanol and therefore was suitable for stabilization of polyamide by diffusion. 1-(1-Naphthyl)- and 1-(4-phenylaminophenyl)dihydro-4(1H,3H)-pyrimidinone-2-thiones were better stabilizers of polyacetals than NG 22-46 and other industrial stabilizers. Cellulose di- and triacetates were stabilized the best by 1-(1-naphthyl)-5 (and 6)-methyldihydro-4(1H,3H)-pyrimidinone-2-thiones which were sol. in methylene chloride and acetone.

IT 21320-98-9 28197-93-5 28215-19-2

79882-18-1 79882-19-2 84439-95-2

84439-96-3 84439-97-4 87973-72-6

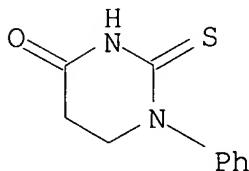
87973-73-7 849996-54-9 849996-55-0

849996-56-1

(hexahydropyrimidine diones and thiones as polymer stabilizers)

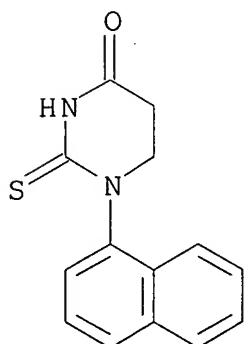
RN 21320-98-9 HCA

CN 4(1H)-Pyrimidinone, tetrahydro-1-phenyl-2-thioxo- (9CI) (CA INDEX NAME)



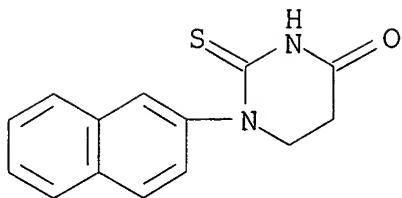
RN 28197-93-5 HCA

CN 4(1H)-Pyrimidinone, tetrahydro-1-(1-naphthalenyl)-2-thioxo- (9CI) (CA INDEX NAME)

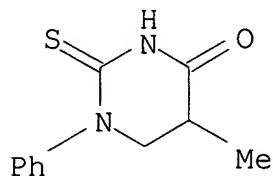


RN 28215-19-2 HCA

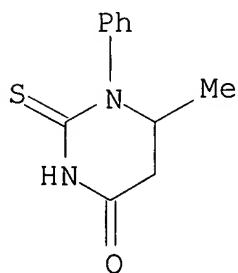
CN 4(1H)-Pyrimidinone, tetrahydro-1-(2-naphthalenyl)-2-thioxo- (9CI) (CA INDEX NAME)



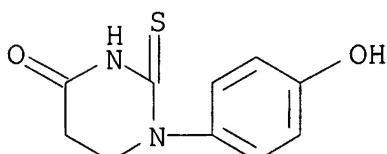
RN 79882-18-1 HCA
 CN 4(1H)-Pyrimidinone, tetrahydro-5-methyl-1-phenyl-2-thioxo- (9CI)
 (CA INDEX NAME)



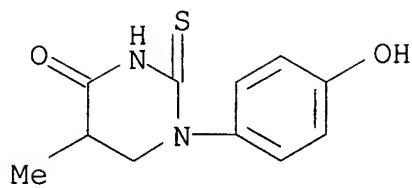
RN 79882-19-2 HCA
 CN 4(1H)-Pyrimidinone, tetrahydro-6-methyl-1-phenyl-2-thioxo- (9CI)
 (CA INDEX NAME)



RN 84439-95-2 HCA
 CN 4(1H)-Pyrimidinone, tetrahydro-1-(4-hydroxyphenyl)-2-thioxo- (9CI)
 (CA INDEX NAME)

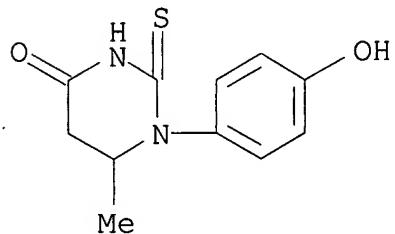


RN 84439-96-3 HCA
 CN 4(1H)-Pyrimidinone, tetrahydro-1-(4-hydroxyphenyl)-5-methyl-2-thioxo- (9CI) (CA INDEX NAME)



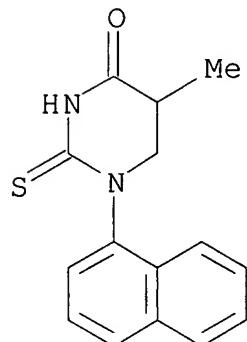
RN 84439-97-4 HCA

CN 4(1H)-Pyrimidinone, tetrahydro-1-(4-hydroxyphenyl)-6-methyl-2-thioxo- (9CI) (CA INDEX NAME)



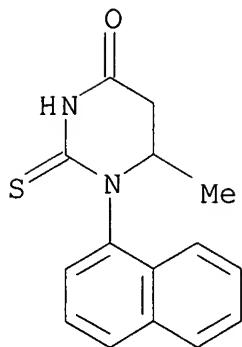
RN 87973-72-6 HCA

CN 4(1H)-Pyrimidinone, tetrahydro-5-methyl-1-(1-naphthalenyl)-2-thioxo- (9CI) (CA INDEX NAME)



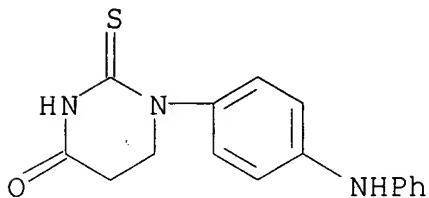
RN 87973-73-7 HCA

CN 4(1H)-Pyrimidinone, tetrahydro-6-methyl-1-(1-naphthalenyl)-2-thioxo- (9CI) (CA INDEX NAME)



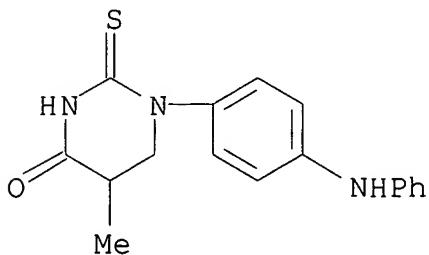
RN 849996-54-9 HCA

CN 4 (1H)-Pyrimidinone, tetrahydro-1-[4-(phenylamino)phenyl]-2-thioxo- (9CI) (CA INDEX NAME)



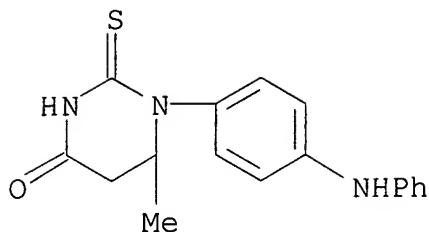
RN 849996-55-0 HCA

CN 4 (1H)-Pyrimidinone, tetrahydro-5-methyl-1-[4-(phenylamino)phenyl]-2-thioxo- (9CI) (CA INDEX NAME)



RN 849996-56-1 HCA

CN 4 (1H)-Pyrimidinone, tetrahydro-6-methyl-1-[4-(phenylamino)phenyl]-2-thioxo- (9CI) (CA INDEX NAME)



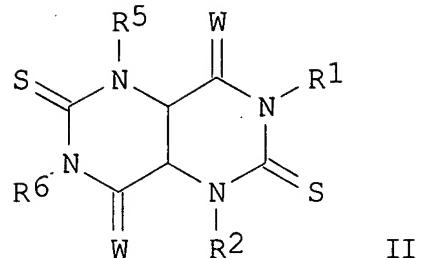
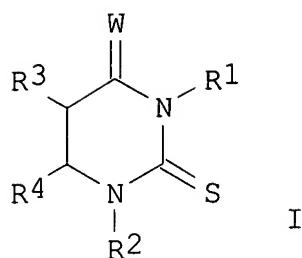
CC 37-6 (Plastics Manufacture and Processing)
 ST hexahydropyrimidine dione thione heat stabilizer polymer;
 hexahydropyrimidinedione heat stabilizer polymer;
antioxidant hexahydropyrimidine dione thione heat polymer;
 PVC stabilizer hexahydropyrimidine dione thione; polyethylene
 stabilizer hexahydropyrimidine dione thione; polyamide stabilizer
 hexahydropyrimidine dione thione; rubber stabilizer
 hexahydropyrimidine dione thione; polyoxymethylene stabilizer
 hexahydropyrimidine dione thione; cellulose acetate stabilizer
 hexahydropyrimidine dione thione

IT **Antioxidants**
 Compressive strength
 Electric resistance
 Elongation at break
 Heat stabilizers
 (hexahydropyrimidine diones and thiones as polymer stabilizers)

IT 15533-68-3 **21320-98-9 28197-93-5**
28215-19-2 36797-69-0 52492-97-4 79882-16-9
 79882-17-0 **79882-18-1 79882-19-2**
84439-95-2 84439-96-3 84439-97-4
 86762-38-1 86762-39-2 **87973-72-6 87973-73-7**
 191531-61-0 191531-62-1 191531-63-2 **849996-54-9**
849996-55-0 849996-56-1
 (hexahydropyrimidine diones and thiones as polymer stabilizers)

L24 ANSWER 3 OF 17 HCA COPYRIGHT 2005 ACS on STN
 140:184417 Bicyclic thioureas as **lubricating** oil
antiwear, anticorrosion, and antioxidant
 additives to replace zinc dialkyl dithiophosphates. Mukkamala,
 Ravindranath (USA). U.S. Pat. Appl. Publ. US 2004029743 A1
 20040212, 4 pp. (English). CODEN: USXXCO. APPLICATION: US
 2003-636111 20030807. PRIORITY: US 2002-2002/PV401540 20020807.

GI



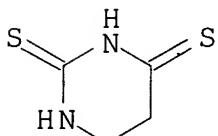
AB Cyclic and bicyclic thiourea-based **lubricating oil antiwear, corrosion inhibitor, and antioxidant** additives, as suitable replacements for zinc dialkyl dithiophosphates, are of general structure I, in which W = O or S; R1 and R2 are H, alkyl, alkenyl, aryl, or aralkyl; R3 and R4 are H, alkyl, alkenyl, aryl, or aralkyl, or R3 and R4 combine with ring carbon atoms to which they are attached to form a five-, six-, or seven-membered heterocyclic ring. At least one of R1-4 is C6-22-alkyl. In addn., the additives can be of general structure II, in which R1 and R2 are as described above, and R5. and R6 are H, alkyl, alkenyl, aryl, or aralkyl. The additives are present at 0.1-20 wt.% concn.

IT **4874-19-5D**, derivs. **5366-11-0D**,
4(1H)-Pyrimidinone, tetrahydro-2-thioxo-, derivs.
651049-46-6D, derivs.

(additives; bicyclic thioureas as **lubricating oil antiwear, anticorrosion, and antioxidant** additives to replace zinc dialkyl dithiophosphates)

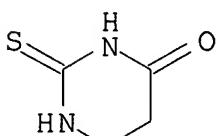
RN 4874-19-5 HCA

CN 2,4(1H,3H)-Pyrimidinedithione, dihydro- (9CI) (CA INDEX NAME)

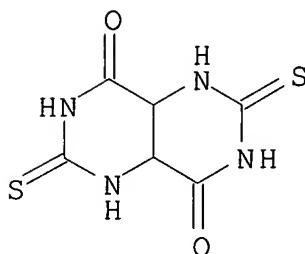


RN 5366-11-0 HCA

CN 4(1H)-Pyrimidinone, tetrahydro-2-thioxo- (9CI) (CA INDEX NAME)



RN 651049-46-6 HCA
 CN Pyrimido[5,4-d]pyrimidine-4,8-dione, octahydro-2,6-dithioxo- (9CI)
 (CA INDEX NAME)



IC ICM C10M135-16
 INCL 508256000
 CC 51-8 (Fossil Fuels, Derivatives, and Related Products)
 Section cross-reference(s): 28
 ST cyclic thiourea **lubricating oil anticorrosion**
antiwear antioxidant additive; bicyclic thiourea
lubricating oil anticorrosion antiwear
antioxidant additive
 IT **Lubricating oil additives**
 (**antioxidants**; bicyclic thioureas as
lubricating oil antiwear, anticorrosion,
 and **antioxidant** additives to replace zinc dialkyl
 dithiophosphates)
 IT **Lubricating oil additives**
 (**antiwear**; bicyclic thioureas as **lubricating**
oil antiwear, anticorrosion, and
antioxidant additives to replace zinc dialkyl
 dithiophosphates)
 IT **Lubricating oil additives**
 (corrosion inhibitors; bicyclic thioureas as **lubricating**
oil antiwear, anticorrosion, and
antioxidant additives to replace zinc dialkyl
 dithiophosphates)
 IT 4874-19-5D, derivs. 5366-11-0D,
 4(1H)-Pyrimidinone, tetrahydro-2-thioxo-, derivs.
 651049-46-6D, derivs.
 (additives; bicyclic thioureas as **lubricating oil**
antiwear, anticorrosion, and
antioxidant additives to replace zinc dialkyl
 dithiophosphates)
 IT 15834-33-0D, Phosphorodithioic acid, dialkyl esters, zinc salts
 (replacement of; bicyclic thioureas as **lubricating oil**
antiwear, anticorrosion, and

antioxidant additives to replace zinc dialkyl dithiophosphates)

L24 ANSWER 4 OF 17 HCA COPYRIGHT 2005 ACS on STN

135:24775 Chiral separation of several thiobarbiturates on a cellulose tris(4-methylbenzoate) phase under reversed-phase conditions.

Aboul-Enein, Hassan Y.; Schmid, Martin G.; Tuscher, Claudia; Gubitz, Gerald; Laffranchini, Maria; Bojarski, Jacek (Pharmaceutical Analysis Laboratory, Biological and Medical Research Department (MBC-03), King Faisal Specialist Hospital and Research Centre, Riyadh, 11211, Saudi Arabia). Journal of Liquid Chromatography & Related Technologies, 24(1), 69-77 (English) 2001. CODEN: JLCTFC.

ISSN: 1082-6076. Publisher: Marcel Dekker, Inc..

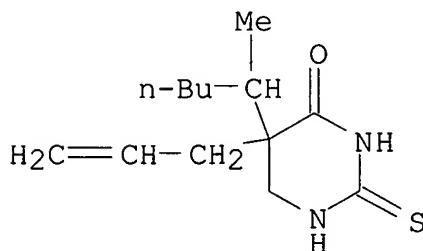
AB The chiral sepn. of several thiobarbiturates on a tris(4-methylbenzoate) phase (Chiralcel OJ-R, 15 .times. 0.46 cm and Chiralcel OJ-R 15 .times. 0.20 cm) under reversed-phase conditions is described. The sepn. properties of a normal sized and a newly developed narrow-bore column were compared. The influence of buffer and org. modifiers on enantioselectivity was investigated. The three mobile phases used were water/acetonitrile (70:30, vol./vol.), water/acetonitrile/methanol (50:25:25, vol./vol.), and water/acetonitrile/methanol (55:15:30, vol./vol.). Of seven thiobarbiturates investigated, five have been resolved. The values of .alpha. (1.11-1.85) and Rs (0.71-5.75) have been reported.

IT **343339-86-6 343339-87-7**

(chiral sepn. of several thiobarbiturates on cellulose tris(4-methylbenzoate) phase by reversed-phase HPLC)

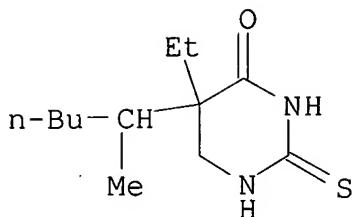
RN 343339-86-6 HCA

CN 4(1H)-Pyrimidinone, tetrahydro-5-(1-methylpentyl)-5-(2-propenyl)-2-thioxo- (9CI) (CA INDEX NAME)



RN 343339-87-7 HCA

CN 4(1H)-Pyrimidinone, 5-ethyltetrahydro-5-(1-methylpentyl)-2-thioxo- (9CI) (CA INDEX NAME)



CC 64-3 (Pharmaceutical Analysis)
 IT 67-52-7D, Barbituric acid, thio, 104169-72-4 156546-51-9
 156546-52-0 156546-53-1 156546-54-2 156546-57-5 156617-92-4
 156617-93-5 156617-97-9 157135-77-8 **343339-86-6**
343339-87-7 343339-88-8 343339-89-9 343339-90-2
 (chiral sepn. of several thiobarbiturates on cellulose
 tris(4-methylbenzoate) phase by reversed-phase HPLC)

L24 ANSWER 5 OF 17 HCA COPYRIGHT 2005 ACS on STN

126:264306 Cycloaddition reactions with both of uridine and 2-thiouridine derivatives. Sayed Ahmed, A. F.; Hattaba, A. (Faculty of Science, Zagazig University, Zagazig, Egypt). Egyptian Journal of Pharmaceutical Sciences, 37(1-6), 423-429 (English) 1996. CODEN: EJPSBZ. ISSN: 0301-5068. Publisher: National Information and Documentation Centre.

AB Cycloaddn. of 2',3',5'-tri-O-acetyluridine and its 2-thio analog with either of 2H-pyran-2-one, 4,6-dimethyl-2H-pyran-2-one, and 2,3-bis(dibromomethyl)benzene is reported.

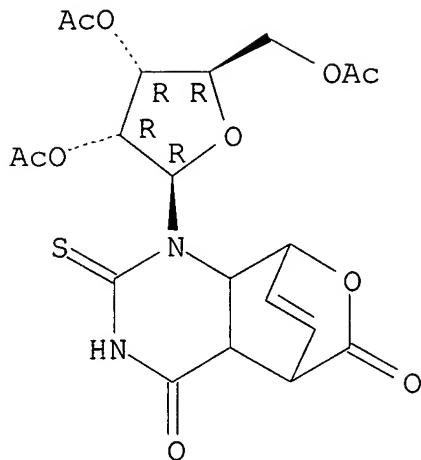
IT **188882-40-8P**

(cycloaddn. of uridine and thiouridine with pyranone and bis(dibromomethyl)benzene)

RN 188882-40-8 HCA

CN 5,8-Etheno-1H-pyrano[3,4-d]pyrimidine-4,6-dione,
 2,3,4a,5,8,8a-hexahydro-2-thioxo-1-(2,3,5-tri-O-acetyl-.beta.-D-
 ribofuranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



CC 33-9 (Carbohydrates)

IT 188882-39-5P **188882-40-8P**

(cycloaddn. of uridine and thiouridine with pyranone and bis(dibromomethyl)benzene)

L24 ANSWER 6 OF 17 HCA COPYRIGHT 2005 ACS on STN

126:238610 Reactions of 5-bromo-6-methoxy-5,6-dihydrouridine and its 2-thio analog with both of some guanidines and mercaptoacrylic acid derivatives. Sayed Ahmed, A. F.; El Kafrawi, E. (Fac. Science, Zagazig Univ., Zagazig, Egypt). Egyptian Journal of Pharmaceutical Sciences, 37(1-6), 285-294 (English) 1996. CODEN: EJPSBZ. ISSN: 0301-5068. Publisher: National Information and Documentation Centre.

AB 5-Bromo-6-methoxy-5,6-dihydrouridine and its 2-thio analog were allowed to react with some substituted guanidine tautomers and .alpha.-mercapto-.beta.-phenylacrylic acid. The products are 5,6-cyclized derivs. of both of uridine and 2-thiouridine.

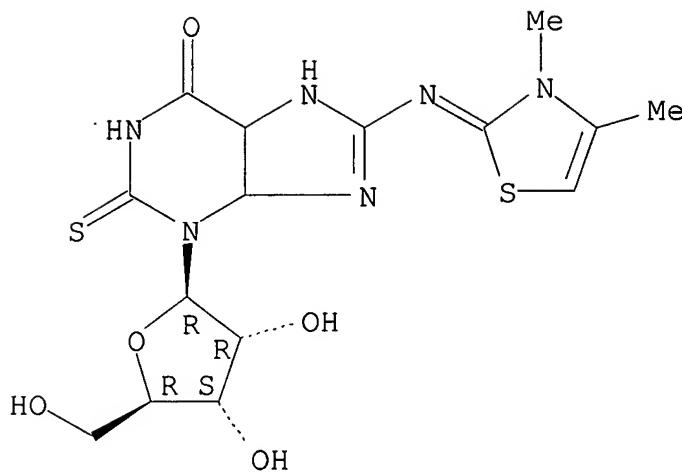
IT **188562-53-0P 188562-55-2P 188562-57-4P****188562-59-6P 188562-61-0P**
(cyclocondensation of bromomethoxydihydrouridine and its thio analog with guanidines and mercaptoacrylic acids)

RN 188562-53-0 HCA

CN Xanthosine, 8-[(3,4-dimethyl-2(3H)-thiazolylidene)amino]-4,5-dihydro-2-thio- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

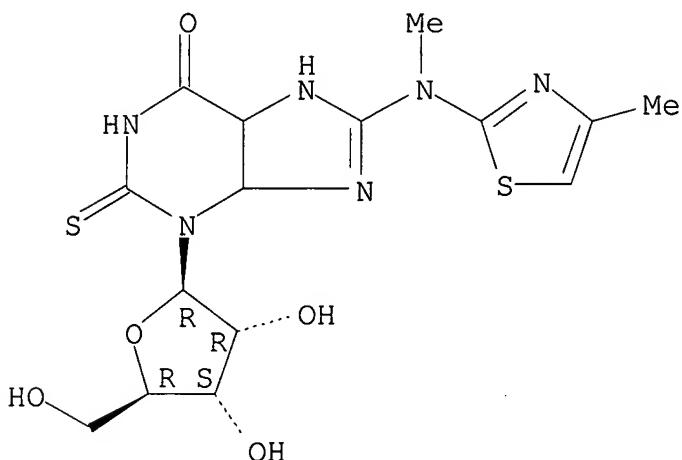
Double bond geometry unknown.



RN 188562-55-2 HCA

CN Xanthosine, 4,5-dihydro-8-[methyl(4-methyl-2-thiazolyl)amino]-2-thio- (9CI) (CA INDEX NAME)

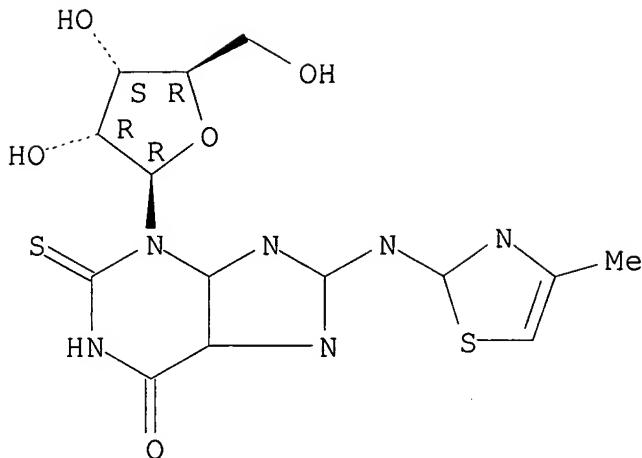
Absolute stereochemistry.



RN 188562-57-4 HCA

CN Xanthosine, 4,5-dihydro-8-[(4-methyl-2-thiazolyl)amino]-2-thio- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



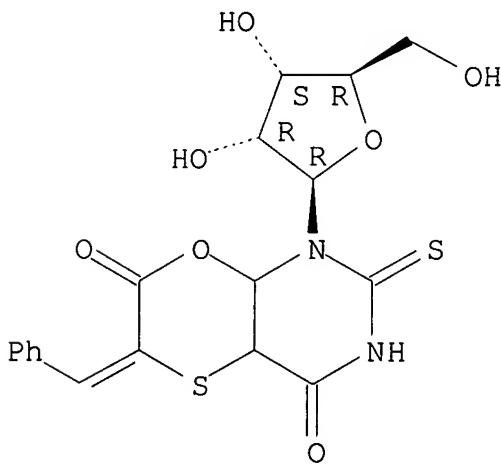
ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 188562-59-6 HCA

CN [1,4]Oxathiino[2,3-d]pyrimidine-4,7(1H,6H)-dione,
tetrahydro-6-(phenylmethylene)-1-.beta.-D-ribofuranosyl-2-thioxo-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

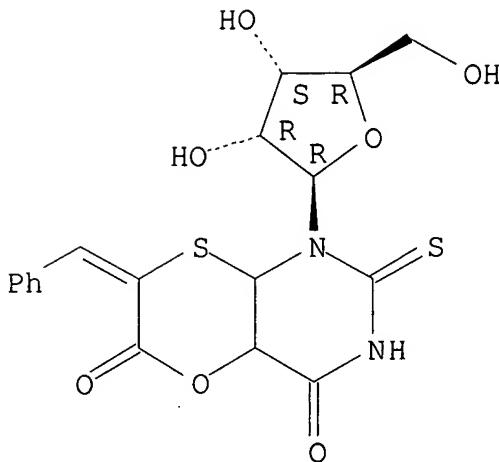


RN 188562-61-0 HCA

CN [1,4]Oxathiino[3,2-d]pyrimidine-4,6(1H,7H)-dione,
tetrahydro-7-(phenylmethylene)-1-.beta.-D-ribofuranosyl-2-thioxo-
(9CI) (CA INDEX NAME)

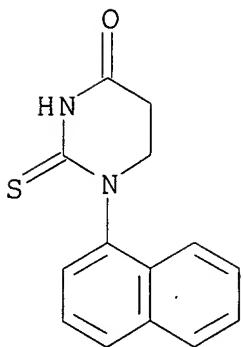
Absolute stereochemistry.

Double bond geometry unknown.



CC 33-9 (Carbohydrates)
 IT 188562-52-9P **188562-53-0P** 188562-54-1P
188562-55-2P 188562-56-3P **188562-57-4P**
 188562-58-5P **188562-59-6P** 188562-60-9P
188562-61-0P
 (cyclocondensation of bromomethoxydihydrouridine and its thio analog with guanidines and mercaptoacrylic acids)

L24 ANSWER 7 OF 17 HCA COPYRIGHT 2005 ACS on STN
 98:108417 Crosslinking polyethylene-based composition. Firsov, Yu. I.;
 Skripko, L. A.; Yakubovskaya, E. P.; Baltrusis, R. (USSR). U.S.S.R.
 SU 973567 A1 19821115 From: Otkrytiya, Izobret., Prom. Obraztsy,
 Tovarnye Znaki 1982, (42), 89. (Russian). CODEN: URXXAF.
 APPLICATION: SU 1981-3285358 19810313.
 AB The title compn. contains polyethylene [9002-88-4] 96.0-98.8, org.
 peroxide 1-3, and 1-(1-naphthyl)-2-thiodihydrouracil [
28197-93-5] **antioxidant** 0.2-1.0% and when cured
 has good strain resistance at elevated temps.
 IT **28197-93-5**
 (**antioxidants**, for peroxide-crosslinked polyethylene)
 RN 28197-93-5 HCA
 CN 4(1H)-Pyrimidinone, tetrahydro-1-(1-naphthalenyl)-2-thioxo- (9CI)
 (CA INDEX NAME)



IC C08L023-06; C08K005-36

CC 37-6 (Plastics Manufacture and Processing)

ST polyethylene hydrothiouracil **antioxidant**; peroxide crosslinking polyethylene; naphthylthiodihydrouracil **antioxidant** polyethylene; thioldihydrouracil **antioxidant** polyethylene

IT **Antioxidants**

(naphthylthiodihydrouracil, for peroxide-crosslinked polyethylene)

IT **28197-93-5**

(**antioxidants**, for peroxide-crosslinked polyethylene)

IT 9002-88-4

(peroxide-crosslinked, naphthylthiodihydrouracil **antioxidant** for)

L24 ANSWER 8 OF 17 HCA COPYRIGHT 2005 ACS on STN

95:188470 Vulcanizable natural rubber stock containing a stabilizer.

Donskaya, M. M.; Sidorova, L. A.; Baltrusis, R.; Beresnevicius, Z.; Andreev, L. V.; Fedorova, T. V.; Pilieva, Z. V. (USSR). U.S.S.R. SU 852903 19810807 From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1981, (29), 119. (Russian). CODEN: URXXAF. APPLICATION: SU 1979-2798325 19790718.

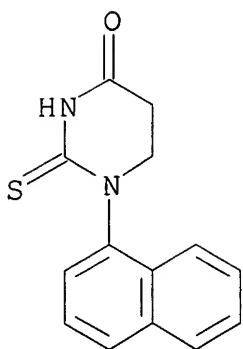
AB The oxidn. resistance of vulcanizates was increased by using a stabilizer consisting of 0.5-3 parts 1-(1-naphthyl)-2-thiodihydrouracil [28197-93-5]/100 parts rubber.

IT **28197-93-5**

(**antioxidants**, for natural rubber)

RN 28197-93-5 HCA

CN 4(1H)-Pyrimidinone, tetrahydro-1-(1-naphthalenyl)-2-thioxo- (9CI)
(CA INDEX NAME)



IC C08L009-00; C08K005-34

CC 38-9 (Elastomers, Including Natural Rubber)

ST naphthylthiodihydouracil **antioxidant** rubber;
thiodihydouracil naphthyl **antioxidant** rubber

IT **Antioxidants**

((naphthyl)thiodihydouracil, for natural rubber)

IT Rubber, natural, uses and miscellaneous

(**antioxidants** for, naphthylthiodihydouracil as)

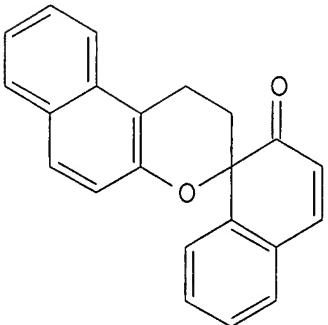
IT **28197-93-5**

(**antioxidants**, for natural rubber)

L24 ANSWER 9 OF 17 HCA COPYRIGHT 2005 ACS on STN

95:187193 Synthesis of some new tetracyclic heteroaromatic chromans via quinone methide intermediates. Chauhan, Mohinder S.; McKinnon, David M. (Dep. Chem., Univ. Manitoba, Winnipeg, MB, R3T 2N2, Can.). Canadian Journal of Chemistry, 59(14), 2223-7 (English) 1981.
CODEN: CJCHAG. ISSN: 0008-4042. OTHER SOURCES: CASREACT 95:187193.

GI



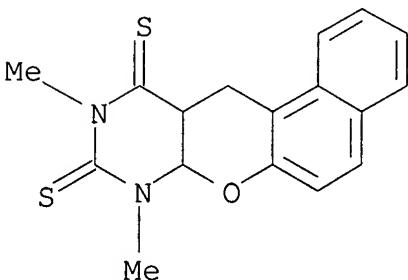
AB Several new tetracyclic heteroarom. chromans were prep'd. by treating various uracil and 1,3-thiazine derivs. with 1,2-naphthoquinone

1-methide. The spirodimer I is a better source of naphthoquinone methide than the naphthol derivs. which provide chromans in low yield due to side reactions. The structure and mechanisms of the various products formed are discussed.

IT **79622-95-0**

(reaction of, with naphthoquinone methide)

RN 79622-95-0 HCA

CN 9H-Naphtho[1',2':5,6]pyrano[2,3-d]pyrimidine-9,11(10H)-dithione,
7a,8,11a,12-tetrahydro-8,10-dimethyl- (9CI) (CA INDEX NAME)

CC 28-17 (Heterocyclic Compounds (More Than One Hetero Atom))

IT 874-14-6 1193-26-6 1193-58-4 1193-87-9 49785-67-3

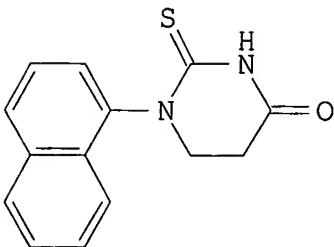
64359-56-4 79622-92-7 **79622-95-0**

(reaction of, with naphthoquinone methide)

L24 ANSWER 10 OF 17 HCA COPYRIGHT 2005 ACS on STN

86:141671 Study of the decorative properties of melamine-alkyd automobile enamels stabilized by 1-(1-naphthyl)-2-thiodihydrouracil.
 Baltrusis, R.; Zitkeviciute, I.; Mecinskas, M.; Beresnevicius, Z.
 (Kaunas. Politekh. Inst., Kaunas, USSR). Deposited Doc., VINITI
 7096-73, 16 pp. Avail. BLLD (Russian) 1973.

GI



I

AB The durability of melamine-alkyd automotive enamels is improved by

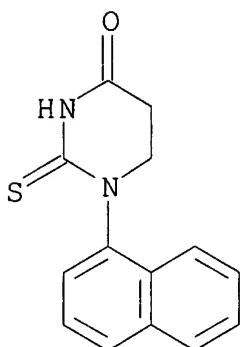
incorporation of dihydro-1-(1-naphthyl)-2-thiouracil (I) [28197-93-5] by diffusion from a polishing compn. I probably acts as an **antioxidant** and also as a light stabilizer due to improved moisture barrier properties. The stabilizer can be introduced either industrially or at home.

IT **28197-93-5**

(stabilizers, for melamine-alkyd automobile enamels)

RN 28197-93-5 HCA

CN 4(1H)-Pyrimidinone, tetrahydro-1-(1-naphthalenyl)-2-thioxo- (9CI)
(CA INDEX NAME)



CC 42-2 (Coatings, Inks, and Related Products)

ST automobile enamel stabilizer; naphthyl thiодihydouracil stabilizer; thiouracil deriv stabilizer; uracil dihydronaphthylthio stabilizer; **antioxidant** dihydronaphthylthiouracil; diffusion stabilization automobile enamel

IT **Antioxidants**

Light stabilizers

(dihydronaphthylthiouracil, diffusion-introduced, for automobile enamels)

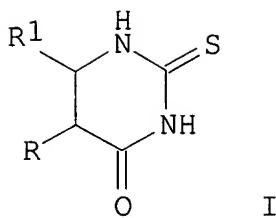
IT **28197-93-5**

(stabilizers, for melamine-alkyd automobile enamels)

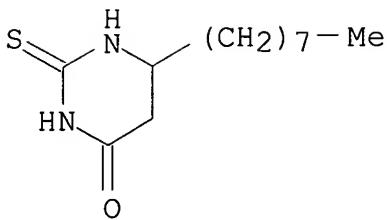
L24 ANSWER 11 OF 17 HCA COPYRIGHT 2005 ACS on STN

85:184865 Light-sensitive recording materials developable by the action of heat. Suzuki, Nobuo; Noguchi, Yasuhiro; Masuda, Takao (Fuji Photo Film Co., Ltd., Japan). Ger. Offen. DE 2528553 19760122, 77 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1975-2528553 19750626.

GI



- AB Heat developable, light-sensitive materials, which have a high sensitivity and show only a slight thermal fog formation, are composed of a suitable support coated with .gtoreq.1 layer contg. an org. Ag salt, a light-sensitive Ag halide or a material capable of reacting with the org. Ag salt to form a light-sensitive Ag halide, a reducing agent, and a 2-thiouracil deriv. I (R = H, Me, Bu, OH; R2 = H, Me, Et, naphthyl, octyl) to reduce thermal fog formation and increase the sensitivity of the material. Thus, to a dispersion contg. Ag laurate 6, poly(vinyl butyral) 12, and EtOH 70 g was added N-bromosuccinimide 0.15 g, the soln. stirred at 50.degree., a 1% soln. of 2-thiouracil in ethylene glycol monomethyl ether 5 ml added, and the dispersion heated for 90 min. To this dispersion were then added a 0.025% soln. of a spectral sensitizer in ethylene glycol monomethyl ether 10, a 3% soln. of lauric acid in ethylene glycol monomethyl ether 35, a 3% soln. of phthalazone in MeOH 50, a 20% soln. of 2,2-bis(3,5-dimethyl-4-hydroxyphenyl)propane in Me2CO 30 ml, and a 0.1% soln. of 2-thiouracil in ethylene glycol monomethyl ether 5 ml. This dispersion was then coated at 0.3 g Ag/m² on a resin-laminated printing paper support, an overcoat of a SiO₂ dispersion in a 10% soln. of Et cellulose (SiO₂:Et cellulose = 1:10) added, the material imagewise exposed using a W-lamp (3000 lx-sec) and then developed for 30 sec at 120.degree. to give a sensitivity of 5.3, a Dmax of 1.5, and a fog of 0.20 vs. 1, 1.50, and 0.48, resp., for a 2-thiouracil-free control.
- IT **62017-49-6**
 (photothermog. copying compns. contg., for decreased thermal fogging)
- RN 62017-49-6 HCA
- CN 4(1H)-Pyrimidinone, tetrahydro-6-octyl-2-thioxo- (9CI) (CA INDEX NAME)



IC G03C
CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic Processes)
IT 56-04-2 141-90-2 141-90-2D, 4(1H)-Pyrimidinone,
2,3-dihydro-2-thioxo-, derivs. 35463-39-9 54089-08-6
60615-63-6 **62017-49-6**
 (photothermogr. copying compns. contg., for decreased thermal fogging)

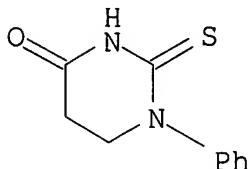
L24 ANSWER 12 OF 17 HCA COPYRIGHT 2005 ACS on STN
82:172874 Stabilization of acetyl cellulose materials from thermal oxidative degradation. Baltrusis, R.; Beresnevicius, Z.; Paskevicius, V.; Libonas, J.; Beresneviciene, R.; Makhteeva, G. A.; Zhbankov, R. G.; Kulakov, V. A.; Monkeviciute, G. (Kaunas Polytechnic Institute, USSR). U.S.S.R. SU 455119 19741230 From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1974, 51(48), 50. (Russian). CODEN: URXXAF. APPLICATION: SU 1971-1727181 19711220.

AB 1-(2-Naphthyl)-2-thiodihydrouracil [28215-19-2],
1-(2-naphthyl)dihydrouracil [36797-69-0] and 1-phenyl-2-
thiodihydrouracil [21320-98-9] are used as
antioxidants for cellulose acetate [9004-35-7].

IT 21320-98-9 28215-19-2
(antioxidants, for cellulose acetate)

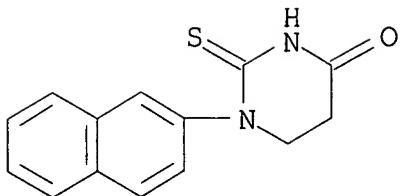
RN 21320-98-9 HCA

CN 4 (1H)-Pyrimidinone, tetrahydro-1-phenyl-2-thioxo- (9CI) (CA INDEX
NAME)



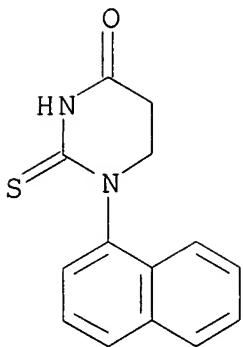
RN 28215-19-2 HCA

CN 4 (1H)-Pyrimidinone, tetrahydro-1-(2-naphthalenyl)-2-thioxo- (9CI)
(CA INDEX NAME)



IC C08B
 CC 43-3 (Cellulose, Lignin, Paper, and Other Wood Products)
 ST **antioxidant** cellulose acetate; uracil deriv
antioxidant acetylcellulose
 IT **Antioxidants**
 (uracil derivs., for cellulose acetate)
 IT **21320-98-9 28215-19-2** 36797-69-0
 (**antioxidants**, for cellulose acetate)
 IT 9004-35-7
 (**antioxidants**, uracil derivs. as)

L24 ANSWER 13 OF 17 HCA COPYRIGHT 2005 ACS on STN
 81:171552 Polishing composition. Mecinskas, M.; Beresnevicius, Z.;
 Baltrusis, R. (Kaunas Polytechnic Institute; Litbytkhim Firm).
 U.S.S.R. SU 421709 19740330 From: Otkrytiya, Izobret., Prom.
 Obraztsy, Tovarnye Znaki 1974, 51(12), 81. (Russian). CODEN:
 URXXAF. APPLICATION: SU 1971-1730079 19711227.
 AB Polishing materials with improved protection against oxidative
 degrdn. were prep'd. by addn. of uracil deriv. compds. to wax compns.
 Thus, 0.5-3% 1-(2-naphthyl)dihydrouracil [36797-69-0] or
 1-(1-naphthyl)-2-thiodihydrouracil [**28197-93-5**] was added
 to a mixt. contg. ceresin 6-20, montan wax 3-5, silicone liq. mixt.
 1.5-3, tetraethoxysilane 0.3-1, alkylphenol resin 0.7-1.5,
 surfactants 2.6-3.9, white spirit 35-45% and the balance H₂O, to
 give the desired polishing compn.
 IT **28197-93-5**
 (**antioxidants**, for wax polishing compns.)
 RN 28197-93-5 HCA
 CN 4(1H)-Pyrimidinone, tetrahydro-1-(1-naphthalenyl)-2-thioxo- (9CI)
 (CA INDEX NAME)



IC C09G
 CC 42-11 (Coatings, Inks, and Related Products)
 ST uracil deriv **antioxidant** coating; polishing compn oxidn
 resistance; montan wax polishing compn; ceresin wax polishing compn
 IT **Antioxidants**
 (naphthyldihydrouracils, for wax polishing compns.)
 IT Ceresin
 Montan wax
 (polishing materials, contg. uracil deriv. **antioxidants**)
)
 IT Polishing materials
 (waxes, uracil deriv. **antioxidants** for)
 IT **28197-93-5** 36797-69-0
 (**antioxidants**, for wax polishing compns.)

L24 ANSWER 14 OF 17 HCA COPYRIGHT 2005 ACS on STN
 78:136229 Tautomerism, protonation, and methylation in
 (methylthio)purines. Factors determining electrophilic attack on
 purines. Reichman, Uri; Bergmann, Felix; Lichtenberg, Dov; Neiman,
 Zohar (Dep. Pharmacol., Heb. Univ., Jerusalem, Israel). Journal of
 the Chemical Society, Perkin Transactions 1: Organic and
 Bio-Organic Chemistry (1972-1999), No. 8, 793-800 (English) 1973.
 CODEN: JCPRB4. ISSN: 0300-922X.

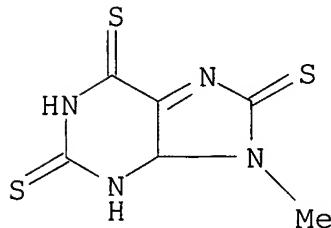
AB The predominant tautomers, the position of protonation in aq. soln.,
 and the course of methylation in aprotic solvents were detd. for all
 the mono- and bis(methylthio)purines and for 2,6,8,-
 tis(methylthio)purine. Protonation gave resonating cations in
 which the charge is distributed over both rings. 8-(Methylthio)-and
 2,8-bis(methylthio)purine underwent methylation at N-1.
 6-(Methylthio)-, 6,8-bis(methylthio)-, and 2,6,8-
 tris(methylthio)purine gave N-3 Me derivs. Methylation of
 2-(methylthio)- and 2,6-bis(methylthio)purine occurred at both N-7
 and N-9. The results were explained in terms of electronic and
 steric factors

IT **41039-45-6P**

(prep. of)

RN 41039-45-6 HCA

CN 1H-Purine-2,6,8(3H)-trithione, 4,9-dihydro-9-methyl- (9CI) (CA INDEX NAME)



CC 28-19 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 22

IT 21802-40-4P 39008-31-6P 39013-74-6P 40577-24-0P 41039-32-1P
41039-33-2P 41039-34-3P 41039-41-2P 41039-43-4P 41039-44-5P
41039-45-6P 41124-32-7P 41124-33-8P 41186-93-0P

(prep. of)

L24 ANSWER 15 OF 17 HCA COPYRIGHT 2005 ACS on STN

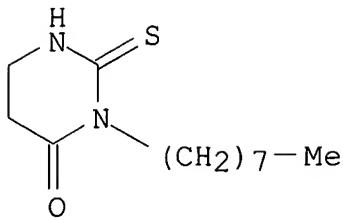
64:93467 Original Reference No. 64:17593c-d 3-Substituted 2-thiohydouracils. Synthesis and antitubercular and antineoplastic activities. Glasser, Arthur C.; Doughty, Richard M. (Univ. of Kentucky, Lexington). Journal of Medicinal Chemistry, 9(3), 351-3 (English) 1966. CODEN: JMCMAR. ISSN: 0022-2623. OTHER SOURCES: CASREACT 64:93467.

AB A no. of 3-substituted 2-thiohydouracils were synthesized by cyclization of the appropriate 1-carboxyethyl-3-substituted 2-thioureas using polyphosphoric acid. Ir spectral characteristics of the NCS-contg. mols. are discussed and compared. The thioureas and resulting thiohydouracils were tested for their in vitro antitubercular activity with min. inhibitory concns. ranging from 1.3-2.5 mg.-% for the thioureas, and from 1.3-5.0 mg.-% for the thiohydouracils. Several of the compds. were also tested for antineoplastic activity.

IT **5540-66-9**, Hydouracil, 3-octyl-2-thio-
(prep. and effect of, on Mycobacterium tuberculosis and neoplasms)

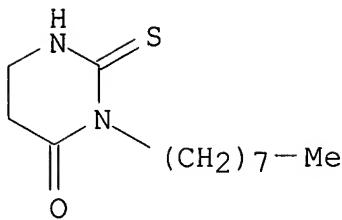
RN 5540-66-9 HCA

CN 4(1H)-Pyrimidinone, tetrahydro-3-octyl-2-thioxo- (9CI) (CA INDEX NAME)



CC 38 (Heterocyclic Compounds (More Than One Hetero Atom))
 IT 1203-29-8, Hydouracil, 3-phenyl-2-thio- **5540-66-9**,
 Hydouracil, 3-octyl-2-thio- 5540-78-3, Hydouracil,
 3-(p-isopropoxyphenyl)-2-thio- 5540-80-7, Hydouracil,
 3-(p-propoxypyhenyl)-2-thio- 5540-81-8, Hydouracil,
 3-(p-sec-butoxyphenyl)-2-thio- 5596-27-0, Hydouracil,
 3-(p-butoxyphenyl)-2-thio- 5596-28-1, Hydouracil,
 3-(p-methoxyphenyl)-2-thio- 30372-00-0, Hydouracil,
 3-[p-(sec-pentyloxy)phenyl]-2-thio-
 (prepn. and effect of, on Mycobacterium tuberculosis and
 neoplasms)

L24 ANSWER 16 OF 17 HCA COPYRIGHT 2005 ACS on STN
 64:93466 Original Reference No. 64:17593b-c Heterocycles. XI. 2-Oxo-
 and 2-thionooctahydroquinazoline-4-spirocyclohexanes. Zigeuner, G.;
 Adam, W.; Weichsel, H. (Univ. Graz, Austria). Monatshefte fuer
 Chemie, 97(1), 55-6 (German) 1966. CODEN: MOCMB7. ISSN: 0026-9247.
 GI For diagram(s), see printed CA Issue.
 AB cf. preceding abstr. I (R = H) (II) (4 g.) in 150 cc. AcOH
 hydrogenated under ambient conditions over PtO₂ yielded the
 2-oxodecahydroquinazoline analog of II, m. 190.degree. (aq. EtOH);
 mono-Ac deriv., m. 193-4.degree. (AcOEt). II (1 g.), 0.15 g.
 paraformaldehyde, and 0.55 g. piperidine HCl salt in 20 cc. EtOH
 heated 3 hrs. on the water bath gave I.HCl (R = piperidinomethyl)
 (III.HCl), m. 198.degree. (aq. Me₂CO); III, m. 220-4.degree. (EtOH).
 IT **5540-66-9**, Hydouracil, 3-octyl-2-thio-
 (prepn. and effect of, on Mycobacterium tuberculosis and
 neoplasms)
 RN 5540-66-9 HCA
 CN 4(1H)-Pyrimidinone, tetrahydro-3-octyl-2-thioxo- (9CI) (CA INDEX
 NAME)



CC 38 (Heterocyclic Compounds (More Than One Hetero Atom))
 IT 1203-29-8, Hydouracil, 3-phenyl-2-thio- **5540-66-9**,
 Hydouracil, 3-octyl-2-thio- 5540-78-3, Hydouracil,
 3-(p-isopropoxyphenyl)-2-thio- 5540-80-7, Hydouracil,
 3-(p-propoxyphenyl)-2-thio- 5540-81-8, Hydouracil,
 3-(p-sec-butoxyphenyl)-2-thio- 5596-27-0, Hydouracil,
 3-(p-butoxyphenyl)-2-thio- 5596-28-1, Hydouracil,
 3-(p-methoxyphenyl)-2-thio- 30372-00-0, Hydouracil,
 3-[p-(sec-pentyloxy)phenyl]-2-thio-
 (prepn. and effect of, on *Mycobacterium tuberculosis* and
 neoplasms)

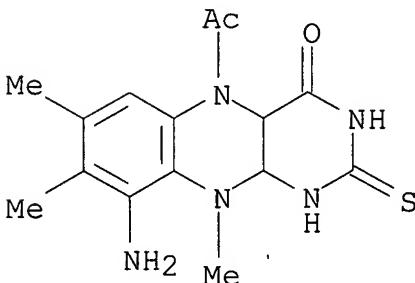
L24 ANSWER 17 OF 17 HCA COPYRIGHT 2005 ACS on STN
 52:1955 Original Reference No. 52:398c-h Synthesis in the lumiflavin series. II. Hemmerich, P.; Erlenmeyer, H. (Univ. Basel, Switz.). Helvetica Chimica Acta, 40, 180-6 (English) 1957. CODEN: HCACAV. ISSN: 0018-019X. OTHER SOURCES: CASREACT 52:1955.
 AB cf. C.A. 51, 2803i. Starting from lumiflavine and its 2-thio analog, the leucoflavine nucleus was obtained and stabilized by reductive acylation. The acyl leuco compds. seem to exhibit the possibility of substitution reactions in 2- and 4-positions. The new lumiflavines obtained show peculiar oxidation-reduction properties. 2-Thiolumiflavin (I) methylated in CHCl₃ with MeI gives 3-methyl-2-thiolumiflavin hydroiodide in red platelets. Attempts to cleave the iodide with AgNO₃ failed. P2S5 (2 g. tech.) in 40 ml. abs. pyridine is boiled with active C and filtered and the filtrate mixed with 0.3 g. lumiflavin and refluxed under stirring under N₂ hrs. The fluorescence disappeared, the soln. became light brown, and the residue was autoxidizable after evapn. Treatment with ice cold 2N HCl, filtration, and washing with H₂O, MeOH, Me₂CO leads to 0.3 g. (crude) 4-thiolumiflavin (II). Lumiflavin (0.5 g.) is treated in 20 ml. 50:50:1 Ac₂O-AcOH-H₂SO₄ with Zn powder, the pale yellow mixt. filtered, evapd., and the residue treated with 50 ml. N AcONa to give 10-acetyl-1,10-dihydrolumiflavin (III) (acetylleucolumiflavin); the residue in N NH₄OH, shaken with C and neutralized with 2N AcOH gives 0.45 g. 10-acetylleucolumiflavin, hydrolyzed with HCl to rhodolumiflavin. The latter is oxidized with O-AcONa or H₂O₂ to lumiflavin. Crude red-brown I (5 g.) is

boiled with 50 ml. AcOH-Ac₂O, Zn added until the color changes from deep violet to brown, a voluminous ppt. dissolved in NaOH, the filtrate acidified with N HCl, and the ppt. filtered off at 0.degree. and purified by pptn. in N NaOH and 2N NH₄OH to give 2.5 g. product, m. about 220.degree., decomp. to violet-brown I, m. 263.degree. (decompn.). The concd. AcOH filtrate worked up gives 1.0 g. 10-acetyl-1,10-dihydro-2-thiolumiflavine (IV), very unstable to heat. IV in 4-6N HCl oxidized leads to rhodothiolumiflavine and after neutralization to I. IV is methylated with NaOH-Me₂SO₄ to 10-acetyl-3-methyl-2-methylmercaptoleucolumiflavine (V), m. 268-72.degree. (decompn.). V saponified with 4N HCl and treated with alk. H₂O₂ gives 3-methylllumiflavine. Crude IV (0.1 g.) dissolved in NH₄OH and boiled with 0.5 g. fresh Raney Ni, filtered, neutralized with AcOH, and evapd. leads to 67% 2-deoxy-10-acetyl-1,10-dihydrolumiflavine (VI), which treated with 4N HCl gives a violet rhodoflavine. After addn. of NaOAc the soln. is extd. with CHCl₃ to give 2-deoxylumiflavine (VII). In AcOH soln. VII is readily oxidized with H₂O₂ to lumiflavine in chromatographic purity. VII is unstable to air and does not crystallize.

IT 857209-15-5, Lumiflavine, 5-acetyl-1,5-dihydro-2-thio-
(prepn. of)

RN 857209-15-5 HCA

CN Lumiflavine, 5-acetyl-1,5-dihydro-2-thio- (6CI) (CA INDEX NAME)



CC 10 (Organic Chemistry)

IT 14331-46-5, Benzo[g]pteridin-4(10H)-one, 7,8,10-trimethyl-
14471-76-2, Isoalloxazine, 7,8,10-trimethyl-2-thio- 15837-00-0,
Lumiflavine, 4-thio- 15837-00-0, Isoalloxazine,
7,8,10-trimethyl-4-thio- 18636-32-3, Isoalloxazine,
3,7,8,10-tetramethyl- 58017-92-8, Alloxazine, 5-acetyl-5,10-
dihydro-7,8,10-trimethyl- 98764-24-0, Benzo[g]pteridin-4(3H)-one,
5-acetyl-5,10-dihydro-3,7,8,10-tetramethyl-2-(methylthio)-
98843-58-4, Benzo[g]pteridin-4(3H)-one, 5-acetyl-5,10-dihydro-7,8,10-
trimethyl- 98843-61-9, Alloxazine, 5-acetyl-5,10-dihydro-7,8,10-
trimethyl-2-thio- 109102-35-4, Lumiflavine, 3-methyl-2-thio-,
hydriiodide 109102-35-4, Isoalloxazine, 3,7,8,10-tetramethyl-2-thio-,
hydriiodide 857209-08-6, Lumiflavine, 2-deoxy-

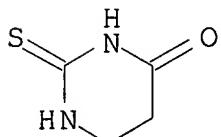
857209-15-5, Lumiflavine, 5-acetyl-1,5-dihydro-2-thio-
 860415-59-4, Lumiflavine, 5-acetyl-1,5-dihydro- 860415-63-0,
 Lumiflavine, 2-deoxy-5-acetyl-1,5-dihydro-
 (prepn. of)

=> d his 125-

FILE 'HCA' ENTERED AT 10:57:36 ON 02 NOV 2005
 L25 362163 S CORRO? OR ANTICORRO? OR RUST? OR ANTIRUST?
 L26 2 S L20 AND L25
 L27 1 S L26 NOT L24

=> d 127 1 cbib abs hitstr hitind

L27 ANSWER 1 OF 1 HCA COPYRIGHT 2005 ACS on STN
 85:147731 Studies on the inhibition of metal **corrosion**. III.
 Some thiocarbonyl compounds as **corrosion** inhibitors for
 copper in acid solution. Hirooka, Motoko; Zen, Shonosuke (Sch.
 Pharm. Sci., Kitasato Univ., Tokyo, Japan). Nippon Kagaku Kaishi
 (7), 1167-70 (Japanese) 1976. CODEN: NKAKB8. ISSN: 0369-4577.
 AB Thiocarbonyl compds. were effective **corrosion** inhibitors
 in acidic media. The most effective compd. was 2-
 mercaptobenzimidazole [583-39-1] which had 92.1 and 100% inhibitive
 effect at the concn. of 32 and 250 ppm, resp. The effect was due to
 the formation of an insol. chelate film on the Cu surface. The
 chelate structure was identified by ir spectra.
 IT **5366-11-0**
 (**corrosion** inhibition by, of copper, in acids)
 RN 5366-11-0 HCA
 CN 4(1H)-Pyrimidinone, tetrahydro-2-thioxo- (9CI) (CA INDEX NAME)



CC 56-8 (Nonferrous Metals and Alloys)
 ST copper **corrosion** inhibitor thiocarbonyl compd
 IT 7440-50-8, reactions
 (**corrosion** by acids, inhibition by thiocarbonyl
 compds.)
 IT 62-55-5 79-19-6 96-53-7 141-90-2 583-39-1 645-48-7
 2227-79-4 2382-96-9 **5366-11-0** 7382-40-3 20174-30-5

(**corrosion** inhibition by, of copper, in acids)